

low rates will only exacerbate subsidy flows to CLECs and further promote uneconomic reliance on Verizon VA's network at the expense of efficient facilities-based competition.

**1. The Order's Radical Approach to Switching Rate Structure Prejudges a Significant Issue Pending Before the Commission and Would Result in Subsidization of High-Usage Customers.**

The *Order* adopts the most extreme proposal on the record with respect to the structure of local switching rates, and eliminates all minute-of-use charges for end office switching. *None* of the thirty-one jurisdictions in which Verizon provides service has imposed this flat-rate structure on Verizon, and even AT&T agreed that it does not properly align with costs. This decision is inconsistent with Commission precedent, *see* 47 C.F.R. § 1.115(b)(ii), and prejudices the very question pending in the *TELRIC NPRM* as to whether such a "change[]" in the rate structure would "comply with the statutory pricing standard under section 252(d)(1)." *TELRIC NPRM* ¶ 132. And it would create a whole new set of subsidy flows from low-volume users to-high volume users (and the carriers that serve them) at a time when the Commission is trying to eliminate such subsidies.

As an initial matter, the *Order's* flat-rate switching structure is inconsistent with Commission precedent. As the *Order* recognizes, under existing rules, "incumbent LECs' rates for interconnection and unbundled elements *must* recover costs in a manner that reflects the way they are incurred."<sup>8/</sup> As the Commission has consistently recognized, a significant portion of switching costs are usage sensitive and thus recoverable on a minute-of-use basis. In the *Local Competition Order on Reconsideration*, for example, the Commission set usage sensitive

---

<sup>8/</sup> First Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 FCC Rcd 15499, 15874 ¶ 743 (1996) ("*Local Competition Order*") (emphasis added); *Order* ¶ 458 (recognizing that under existing rules "UNE rates [must] be structured consistently with the manner in which the costs of providing them are incurred").

minute-of-use proxy rates for the switching UNE and expressly found that “the unbundled local switching element, as defined in section 251(c)(3), includes . . . the *usage-sensitive* switching matrix.”<sup>9/</sup> In addition, the Commission’s universal service Synthesis Model itself allocates 70% of switching costs to the minute-of-use category.<sup>10/</sup> Similarly, the Commission has repeatedly approved 271 applications in which significant portions of switching costs were recovered through a minute-of-use component.<sup>11/</sup> And the Commission likewise has concluded in the access charge context that switching costs are usage sensitive “and so should be priced on a usage-sensitive basis.”<sup>12/</sup>

---

<sup>9/</sup> Order on Reconsideration, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 FCC Rcd 13042, 13045 ¶ 6 (1996) (“*Local Competition Order on Reconsideration*”); see also 47 C.F.R. § 51.513(c)(2).

<sup>10/</sup> See Tr. at 5211-12 (AT&T/WCom witness Ms. Pitts admitting that the Synthesis Model by default identifies 70% of switching costs as traffic sensitive and 30% as non-traffic sensitive).

<sup>11/</sup> Memorandum Opinion and Order, *Application by Verizon Virginia Inc., Verizon Long Distance Virginia Inc., Verizon Enterprise Solutions Virginia Inc., Verizon Global Networks Inc., and Verizon Select Services of Virginia Inc., for Authorization to Provide In-Region, InterLATA Services in Virginia*, 17 FCC Rcd 21880, 21948-49 ¶ 121 (2002) (“*Virginia 271 Order*”); Memorandum Opinion and Order, *Application by Verizon New England Inc., Verizon Delaware Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions), Verizon Global Networks Inc., and Verizon Select Services Inc., for Authorization To Provide In-Region, InterLATA Services in New Hampshire and Delaware*, 17 FCC Rcd 18660, 18697-98 ¶ 61 (2002) (“*New Hampshire/Delaware 271 Order*”); Memorandum Opinion and Order, *Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc. for Provision of In-Region, InterLATA Services in Alabama, Kentucky, Mississippi, North Carolina, and South Carolina*, 17 FCC Rcd 17595, 17641 ¶ 93 (2002) (“*BellSouth Five-State 271 Order*”).

<sup>12/</sup> Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, *Access Charge Reform Price Cap Performance Review for Local Exchange Carriers*, 11 FCC Rcd 21354, 21392-93 ¶ 73 (1996) (“*Access Reform NPRM*”); Order Terminating Tariff Investigation, *Iowa Telecomms. Servs., Inc.*, WC Docket No. 03-135, FCC 03-221 ¶ 4 (rel. Sept. 9, 2003) (allowing a traffic sensitive access rate for Iowa Telecom).

Likewise, here, all the parties agreed that at least a portion of switching costs are traffic sensitive and vary with usage. As Verizon VA explained, “[a] rate structure that captures both port and usage charges . . . is consistent with the way costs are incurred for circuit switching.” Verizon Virginia Rebuttal Testimony of Harold E. West III at 2 (Aug. 27, 2001) (“VZ-VA Ex 115”). Verizon’s switching cost studies thus identified 63.16% of switching resources as traffic sensitive. See Verizon Virginia Inc. Initial Post-Hearing Brief on Switching Issues at 16-17 (Jan. 17, 2002) (“VZ-VA Switching Br.”). Even AT&T did not support a flat-rated switching charge and acknowledged that such a rate structure “does not properly align rates and costs.” Direct Testimony of Robert J. Kirchberger on Behalf of AT&T at 15 (July 31, 2001) (“AT&T Ex. 4”). And WorldCom, which proposed the flat-rate approach, also confessed that at least some switching costs do vary with usage, and simply asserted that a flat-rate would be “easy to administer and audit.”<sup>13/</sup> AT&T and WorldCom claimed that between 16 and 40% of switching resources were traffic sensitive. See VZ-VA Switching Br. at 17-18.

Likewise, the *Order* itself acknowledges that some costs are traffic sensitive and “vary with usage.” *Order* ¶ 473. As it stated, for certain switching resources, “[t]he record supports a finding that the equipment for which these costs are incurred is a limiting resource and that congestion or blocking will occur as usage increases.” *Id.* The *Order* found that usage sensitive costs could best be recovered through a peak-period rate structure, which would charge different MOU rates for usage during the peak calling period than during non-peak times, but noted that such a structure is difficult to implement. See *id.* ¶¶ 474-75. Yet, rather than attempt to correlate

---

<sup>13/</sup> Joint Initial Post-Hearing Brief of WorldCom, Inc. and AT&T on Switch Cost Issues at 26 (Jan. 17, 2002) (“AT&T/WCom Switching Br.”); see also Direct Testimony of Chuck Goldfarb on Behalf of WorldCom, Inc. at 4 (July 31, 2001) (“WCom Ex. 5”) (admitting that certain switching resources are designed in anticipation of peak period usage but proposing that they be recovered through a flat rate for administrative reasons).

cost causation and rates in the manner that Verizon VA and AT&T had proposed — through an average MOU rate — the *Order* simply abandons any pretense of setting cost causative rates at all.

In addition to being inconsistent with the Commission's own precedent, the *Order's* determination also will create new subsidy flows in addition to those that already exist under TELRIC. Under a flat-rate structure, customers with below-average usage levels will subsidize customers with above-average usage levels, *see* VZ-VA Switching Br. at 20; VZ-VA Ex. 115 at 5 — precisely those customers that CLECs generally target.<sup>14/</sup> The *Order's* suggestion that Verizon had not proven the existence of this subsidy wholly defies common sense. When a product or service is offered at a flat rate, high volume users obviously will benefit more than low volume users since high volume users will not pay more for the greater share of resources they consume. To take a simple example, customers who eat less at an “all-you-can-eat” buffet clearly subsidize customers who eat more.

The *Order's* assertion that its admittedly “imperfect” solution is acceptable because Verizon VA offers a flat-rated calling plan to its *retail* users, *Order* ¶ 478, misses the point. Verizon VA's decisions regarding the rates it charges retail customers are not relevant to the

---

<sup>14/</sup> Statement of Betsy Bernard, AT&T Consumer Services President and CEO, *Q2 2002 AT&T Earnings Conference Call — Final*, Fair Disclosure Wire, Transcript 072302au.729 (July 23, 2002) (“Once we’ve entered a state, we design and target each offer to high-value customers to further improve the economics of the business.”); *id.*, Transcript 072302au.742 (July 24, 2002) (David Dorman, Chairman and CEO, AT&T, noting that “AT&T consumer second quarter results demonstrate continued progress in expanding our product portfolio in new markets to attract and retain high-value customers. As we continue our transition from a standalone long distance company to a provider of [a] robust bundle of services, the bulk of our energy is being directed toward this high value segment, which represents a higher priority for us than the overall market share gains.”); *id.* (Dorman noting that AT&T is “very, very focused on” the “high-value customer segment”); Legg Mason, *Telephone Wars: Local Competition Update* at 2 (May 22, 2001) (“The CLEC sales figures reflect larger market share gains than those calculated on the basis of line loss, since the majority of lines lost are of the high-usage commercial type.”).

proper UNE rate structure. *See* VZ-VA Switching Br. at 21. Verizon VA decides whether to offer its retail customers flat-rated service or to charge them according to peak period usage based on its assessment of, among other things, the risks of underestimating average usage (and therefore underrecovering costs) and the attractiveness to the retail customer of paying a particular type of rate. CLECs can and should make those same business decisions. Their costs — in the form of UNE rates — therefore should reflect the way in which the underlying network costs are incurred, just as Verizon VA's do. A flat-rated structure clearly does not. Nor is there any basis to the *Order*'s argument that its structure is preferable because a flat rate avoids the problem of "estimating the minutes of use over which to spread [Verizon's] switching costs." *Order* ¶ 477. In fact, the *Order* provides just such an estimate with respect to determining a minute-of-use rate for tandem switching (although, as discussed below, its estimate is incorrect). *Id.* ¶¶ 454-57.

Finally, the *Order* also errs in deciding that switch processor costs do not vary with usage and therefore should be recovered through a flat-rate charge in any case. *See id.* ¶¶ 463-71. In fact, the costs of switch processing resources do vary with usage because they are sized based on expected usage: in other words, the size of the switch processor Verizon VA purchases — and therefore its cost — depends on how much traffic Verizon VA expects to traverse the switch.<sup>15/</sup> The Commission itself has noted that "the unbundled local switching element, as defined in

---

<sup>15/</sup> *See* Verizon Virginia Inc. Surrebuttal Testimony of David Garfield at 6-8 (Sept. 21, 2001) ("VZ-VA Ex. 123"); Verizon Virginia Inc. Recurring Cost Panel Surrebuttal Testimony at 176 (Sept. 21, 2001) ("VZ-VA Ex. 122"); VZ-VA Switching Br. at 19-20; Verizon Virginia Inc. Post-Hearing Reply Brief at 107-08 (Jan. 31, 2002) ("VZ-VA Reply Br.").

section 251(c)(3), includes . . . the *usage-sensitive* switching matrix,” which includes the processing resources.<sup>16/</sup>

The two bases the *Order* cites for its contrary conclusion are contradicted by the record. First, the *Order* states that “modern switches typically have large amounts of excess central processor and memory capacity, [and therefore] the usage by any one subscriber or group of subscribers is not expected to press so hard on processor or memory capacity at any one time as to cause call blockage, or a need for additional capacity to avoid such blockage.” *Order* ¶ 463. But the fact that Verizon VA’s engineers accurately plan so that “the central processor and memory of a modern switch installed today are unlikely to exhaust as a result of increased subscriber usage,” *id.* ¶ 468, does not show that processor costs are unrelated to usage levels: it simply shows that Verizon engineers are skilled at predicting such usage. As Verizon VA showed, switch processors include tools designed to decrease the chance of exhaust situations in case the engineers do *not* predict precisely. *See* VZ-VA Ex. 123 at 7-8. In any event, as discussed in more detail below in connection with the switch discount, Verizon VA does buy switching capacity in growth increments, including the replacement of and upgrades to switch processor equipment, and therefore increases switch capacity over time in response to increase in demand. *See* VZ-VA Ex. 122 at 176-87; VZ-VA Ex. 123 at 6-12. And though the *Order* notes that many of Verizon’s upgrades to switch processors have been mandated by switch vendors, *see Order* ¶ 466, Verizon’s witness explained that switch vendors mandate those upgrades to help carriers avoid exhaust situations. *See* VZ-VA Ex. 123 at 7-8.

---

<sup>16/</sup> *Local Competition Order on Reconsideration* at 13045 ¶ 6; Verizon Virginia Inc. Rebuttal Testimony of Dr. Howard Shelanski at 26-27 (Aug. 27, 2001) (“VZ-VA Ex. 110”).

Second, the *Order* nonsensically appears to reason that switch processor capacity is a fixed cost because Verizon pays switch processor costs up front (as part of so-called “getting started” costs). *See Order* ¶ 464. But *when* Verizon incurs processor-related costs does not determine whether those costs vary based on anticipated usage levels. As noted above, estimated usage determines the *amount* of costs Verizon VA incurs, and actual usage will determine whether additional costs must be incurred. Thus, switch processor costs are necessarily usage sensitive.

Thus, the *Order* fundamentally errs in adopting a flat-rate structure for end office switching charges. The Commission should reverse this decision and instead adopt Verizon VA’s proposed rate structure under which 63.16% of Verizon VA’s total switching investment should be recovered through a traffic sensitive minute-of-use rate, while the remaining 36.84% relating to the port should be recovered through a flat rate. *See VZ-VA Ex. 122 at 191-97; VZ-VA Switching Br. at 16-17.* As Verizon VA explained, it allocated port resources to the non-traffic sensitive rate and all other resources to the traffic sensitive rate, because every feature of the switch aside from the port is sized according to expected usage levels and potentially requires replacement or supplementation as usage increases. *See, e.g., VZ-VA Ex. 123 at 6.* In granting Verizon’s 271 applications in various jurisdictions, the Commission has approved very similar switching rate structures and has rejected CLEC arguments that TELRIC requires a greater allocation of switching costs to the non-traffic sensitive category.<sup>17/</sup>

---

<sup>17/</sup> *See Virginia 271 Order at 21947-49 ¶¶ 119-21* (rejecting AT&T’s claim that the Virginia Commission’s allocation of “getting started” costs to the traffic sensitive category constituted a TELRIC violation); *Opinion and Order, Application by Verizon New England Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions), Verizon Global Networks Inc., and Verizon Select Services Inc., for Authorization to Provide In-Region, InterLATA Services In Maine*, 17 FCC Rcd 11659,

**2. The Order's Switch Discount Assumptions Are Economically Irrational and Internally Contradictory.**

The *Order* adopts a switch discount under which more than 90% of Verizon VA's vendor switching equipment is assumed to have been purchased at so-called "new switch" discounts, which are as high as 99% off the list price. This outcome is inconsistent with the Commission's guidance on the appropriate switch discount assumption under TELRIC, makes no economic sense, and is contradicted by the *Order*'s own conclusions.

The *Order* adopts an "all new" discount for so-called "getting started" equipment — most of the switch processor resources — and a melded discount comprised of 85% to 88% new switch purchases for all remaining switching equipment. *Order* ¶¶ 403, 415. Together these decisions assume that more than 90% of all switching equipment is bought at "new switch" discounts. Moreover, the decision assumes that a carrier would purchase this 90% of its switching network at discounts of up to 99% off the list price.<sup>18/</sup>

But as the *Order* itself recognizes, manufacturers would not offer high new switch discounts if carriers bought most switching capacity at new switch rates. As it expressly observes, "[i]f carriers did not typically grow their switches over time, it is unlikely that switch vendors would provide relatively large discounts on the initial switch investment." *Order* ¶ 386

---

11674-78 ¶¶ 26-30 (2002) ("*Maine 271 Order*") (approving the Maine Commission's allocation of 70% traffic sensitive and 30% non-traffic sensitive); *Order* No. 78552, *Investigation Into Rates for Unbundled Network Elements Pursuant to the Telecommunications Act of 1996*, Case No. 8879 at 64 (Md. Pub. Serv. Comm'n June 30, 2002) ("*Maryland UNE Order*") (adopting Verizon's proposed split of 61% traffic sensitive, 39% non-traffic sensitive); Tentative Order, *Generic Investigation Re Verizon Pennsylvania, Inc.'s Unbundled Network Element Rates*, R-00016683, at 145-46 (Pa. Pub. Util. Comm'n Oct. 24, 2002) ("*Pennsylvania Tentative Order*") (adopting Verizon's proposed split of 55% traffic sensitive, 45% non-traffic sensitive).

<sup>18/</sup> See *Order* ¶ 390 n.1018 (ordering Verizon to use the discounts it received for new switch purchases in 2000 as provided in response to a staff record request); Verizon Ex. 216P (providing information on discounts received for new switches).

n.1014. This is because “levels of new and growth switch discounts reflect vendors’ judgments about anticipated purchases.”<sup>19/</sup> Manufacturers make such discounts available because “efficient carriers do add to or grow their switches over time,” *Order* ¶ 386, and thus much of switching capacity is purchased at “growth discounts,” which typically are much lower than the new switch discounts. *See, e.g.*, Tr. at 2953-54 (Shelanski); VZ-VA Switching Brief at 9. As the D.C. Circuit has recognized, manufacturers offer substantial new switch discounts because that “locks in” carriers to purchase more expensive additions to that new switch.<sup>20/</sup> If carriers bought 90% new switches, rational switch vendors could not possibly offer extremely high discounts for new switches and still recover their costs. As the Commission argued to the D.C. Circuit and the court ultimately agreed, in “an ideal world where vendors can’t lock telephone companies into their product” with the expectation of additional growth purchases, such deep new switch discounts would not exist.<sup>21/</sup>

Thus, if carriers used primarily new switches to deploy switching capacity, as the *Order* assumes, the current discounts unquestionably do not reflect the prices that would prevail. Under such a scenario, vendors inevitably would *increase* their prices for new switches due to higher demand. *See* VZ-VA Ex. 122 at 168-69; Tr. at 2953-54 (Shelanski). In order to remain

---

<sup>19/</sup> *See Order* ¶ 386 n.1014 (citing *BellSouth Five-State 271 Order* at 17635 ¶ 83; Memorandum Opinion and Order *Joint Application by BellSouth Corp., BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in Georgia and Louisiana*, 17 FCC Rcd 9018, 9059 ¶ 81 (2002) (“*Georgia/Louisiana 271 Order*”).

<sup>20/</sup> *See AT&T Corp. v. FCC*, 220 F.3d 607, 618 (D.C. Cir. 2000) (agreeing with the Commission’s position that “growth additions to existing switches cost more than new switches *only because* vendors offer substantial new switch discounts in order to make telephone companies dependent on the vendors’ technology to update the switches”) (emphasis added).

<sup>21/</sup> Oral Argument Tr. at 35, *AT&T Corp. v. FCC*, 220 F.3d 607 (D.C. Cir. 2000) (argued Apr. 24, 2000); *AT&T Corp.*, 220 F.3d at 618.

economically viable, manufacturers would still have to recover the same average per-line revenue even if the mix of new and growth purchases were different. This might be thought of as a form of “life cycle” cost for switching capacity, where the life-cycle price is the aggregate price that the switch manufacturer will try to recoup over the entire range of components it expects incumbents to purchase. The *Order*, while giving lip service to this theory, completely ignores it in adopting the switch discount assumption. This “[i]nternally inconsistent reasoning . . . is not entitled to any deference by the courts and is inherently arbitrary and capricious.”<sup>22/</sup>

In addition to its erroneous approach to the switch discount generally, the *Order* specifically errs in its adoption of an all-new switch discount for switch processor equipment. This decision is contrary to the undisputed record evidence demonstrating that Verizon VA upgrades and grows the processor components of its switches — purchases for which Verizon does not receive the high new switch discount. See VZ-VA Ex. 122 at 176-78. The *Order* provides no rational basis for rejecting this evidence, finding only that “[t]o the extent that ‘getting started’ equipment is augmented or replaced for reasons other than growth, use of a discount other than the new switch discount to develop ‘getting started’ investment would result in rates that recover from current subscribers costs for future upgrades from which they receive no benefit today.” *Order* ¶ 393. As Verizon explained, however, the upgrade growth purchases that it makes for processor equipment, such as to upgrade to newer technologies, is necessary for optimum switch operation *today* and therefore should be included in calculating switching costs. See VZ-VA Ex. 122 at 176-78.

---

<sup>22/</sup> *La. Fed. Land Bank Ass’n v. Farm Credit Admin.*, 180 F. Supp. 2d 47, 57 (D.D.C. 2001), *rev’d on other grounds*, 336 F.3d 1075 (D.C. Cir. 2003).

Instead of the *Order's* irrational switch discounts, the Commission should adopt the discounts proposed by Verizon VA, which were based on Verizon VA's recent purchases and current contracts. In particular, Verizon VA asked each vendor to provide a list of all switching equipment purchases that Verizon made during year 2000, including the list prices and actual prices that Verizon paid. From this information, which was the most recent available data at the time the cost studies were done, Verizon VA calculated the effective discount that it actually received during the timeframe the purchases were made.<sup>23/</sup> As Verizon VA explained, this data reflects the mix of new and "growth" switches Verizon VA expects to purchase going forward to add capacity to its network and is the best objective measure of what manufacturers would offer in the way of a switch discount.<sup>24/</sup> These discounts reflect the revenues that Verizon's switch vendors expect to recover over the range of switch purchases they expect Verizon to make. And, as noted above, if Verizon VA were expected to buy more new switches and less growth equipment, then manufacturers would necessarily use a different pricing structure to recover more of their costs from new switches. Thus, the average cost of switching capacity would not change in a hypothetical TELRIC world. The Commission accordingly should adopt these discounts.<sup>25/</sup>

---

<sup>23/</sup> The effective discount was [BEGIN VERIZON PROPRIETARY] XXXX [END VERIZON PROPRIETARY] for Lucent and [BEGIN VERIZON PROPRIETARY] XXXX [END VERIZON PROPRIETARY] for Siemens. For Nortel, which accounts for less than 4% of switches in Verizon VA's network, the discount Verizon VA used in its switching cost studies is based on current contracts that the parties entered into in December 2000. Verizon VA used this information rather than the actual purchases for year 2000 because these contracts most accurately capture the latest material prices available to Verizon from Nortel.

<sup>24/</sup> Tr. at 5235 (Gansert); *id.* at 5230 (Matt); Verizon Virginia Inc.'s Recurring Cost Panel Direct Testimony at 189-94 (July 31, 2001) ("VZ-VA Ex. 107"); VZ-VA Ex. 122 at 166-71.

<sup>25/</sup> Alternatively, the Commission could use the discounts that Verizon VA submitted in response to a Staff record request during hearings, which captured the discounts Verizon

3. **The Order's Determination that All Switch Ports Should Be IDLC-GR-303 Is Contrary to the Record and the Commission's Rules.**

The *Order* assumes that 100% of the fiber-fed loops in the forward-looking network use IDLC and that therefore switches use all IDLC-GR-303 digital line ports. This conclusion is wrong because it ignores the fact that IDLC-GR-303 cannot be used to unbundle standalone loops or to serve non-switched services, and that the network therefore must contain UDLC.<sup>26/</sup> The *Order's* determination is flatly inconsistent with the Commission's rule that TELRIC rates must be based only on "currently available" technology, since IDLC-GR-303 is *not* currently capable of being used to provide unbundled loops. The *Order* therefore necessarily assumes that unbundled loops are provided using a technology that is not even capable of being used to unbundle loops and is fundamentally irrational. The percentages of the various types of DLC technology that are assumed for the forward-looking network are a "critical determination[]" for UNE costs, and the *Order* accordingly seriously understates switching costs. *Order* ¶ 303.

The *Order's* finding that "[IDLC-GR303] loops are capable of being unbundled today," *id.* ¶ 310, is wrong. The Commission explicitly stated in the *Virginia 271 Order* that "it is not technically feasible to unbundle an IDLC loop." *Virginia 271 Order* at 21963-64 ¶ 148. The Commission similarly concluded in various section 271 orders that it is appropriate to base standalone loop costs on 100% UDLC, *BellSouth Five-State 271 Order* at 17625 ¶ 62, and

---

received from its switching vendors over a five-year period. The effective discounts Verizon VA received during this time period is indicative of the overall discount Verizon might experience for a switch over its life. See VZ-VA Ex. 212; VZ-VA Switching Br. at 5-6. Verizon VA's proposal is quite conservative, since it includes relatively high discounts due to the end of the digital switch lifecycle.

<sup>26/</sup> Fiber-fed loops are served over either UDLC (universal digital loop carrier) or IDLC (integrated digital loop carrier). IDLC can in turn use two different technologies — TR-008 or GR-303. UDLC-fed lines enter the switch using analog switch ports, while IDLC uses digital ports.

rejected CLEC arguments that 100% IDLC-GR-303 must be assumed for such loops. *Id.*; *Georgia/Louisiana 271 Order* at 9046 ¶ 50. Indeed, though the *Order* refuses to consider this evidence, even the CLECs have now conceded that GR-303 cannot provision unbundled loops and that other electronic solutions are therefore necessary. AT&T stated in its *Triennial Review* comments that “[t]here are provisioning, alarm reporting, and testing issues that have not yet been worked out for using GR-303 in a multi-carrier environment,” and “other operational concerns must be addressed before the deployment of any solution whose underlying architecture and technology is premised on GR-303 DLCs.”<sup>27/</sup>

The record also overwhelmingly demonstrates that IDLC-GR-303 cannot be used to provision unbundled standalone loops. Verizon VA introduced unrebutted evidence showing that, because IDLC by its very nature *integrates* the loop directly into the switch, IDLC-based loops have to be groomed to UDLC or copper (or otherwise manually redirected to the CLECs’ collocation space) in order to be unbundled on a standalone basis. VZ-VA Ex. 122 at 81. The record showed that even Telcordia, the author of the GR-303 protocol, recognized that various security, error protection, and OSS concerns must be resolved in order for GR-303 to be capable of unbundling standalone loops.<sup>28/</sup> Indeed, as of 2003, Telcordia continues to maintain that technological barriers make unbundling using GR-303 infeasible. Its updated web site still refers

---

<sup>27/</sup> Letter from Joan Marsh, Director, Federal Government Affairs, AT&T Corp., to Marlene Dortch, Secretary, FCC, CC Docket Nos. 01-338, 96-98, and 98-147, at 3 (filed Dec. 4, 2002); VZ-VA Proffer, Supplemental Testimony of Joseph A. Gansert at 5-7 (Apr. 15, 2003) (“Gansert Supplemental Testimony”).

<sup>28/</sup> VZ-VA Ex. 157 at 1 (Telcordia’s website notes that “*new requirements are needed to support alternative distribution technologies . . . as well as new services and applications (e.g., . . . local loop unbundling).*”) (emphasis added); *see also* Tr. at 4585-86.

to the GR-303 “implementation issues,” acknowledging that Telcordia has yet to “resolve implementation issues related to GR-303 NG-IDLC systems.”<sup>29/</sup>

While the industry has been grappling with the necessary solutions for some time, no DLC equipment manufacturer sells equipment that allows standalone loops to be unbundled using IDLC, even with GR-303.<sup>30/</sup> Thus, not surprisingly, even AT&T witness Joseph Riolo admitted that, to his knowledge, “[n]o local exchange carrier . . . is presently unbundling with GR303 technology,” and that his proposed solution for IDLC-GR-303 unbundling therefore remained purely theoretical. Tr. at 4619, 4616 (emphasis added). Therefore, the *Order* irrationally assumes that all fiber-fed loops are unbundled using a technology that is not even capable of performing that function. And it does so notwithstanding the fact that Verizon VA has not deployed the assumed technology in Virginia and does not plan to do so.

In addition, because the *Order* assumes the use of a technology that is not currently available to provision standalone unbundled loops, it is fundamentally inconsistent with the Commission’s rules requiring that any technology assumed for TELRIC-purposes must be “currently available.” 47 C.F.R. § 51.505(b)(1). The Supreme Court has pointed to this rule as one of the chief constraints on TELRIC.<sup>31/</sup> The *Order* seeks to defend its 100% IDLC

---

<sup>29/</sup> VZ-VA Proffer, Gansert Supplemental Testimony, Exhibit 5 (<http://www.telcordia.com/resources/generic/q/gr303/> (last visited Apr. 2, 2003)); *see also* VZ-VA Proffer at 17-20; VZ-VA Proffer, Gansert Supplemental Testimony at 7.

<sup>30/</sup> Verizon Virginia Inc. Initial Post-Hearing Brief at 90-92 (Dec. 21, 2001) (“VZ-VA Initial Br.”); Tr. at 4583-85 (Gansert); Verizon Virginia Inc. Non-Recurring Cost Panel Surrebuttal Testimony, Attachment A (Sept. 21, 2001) (“VZ-VA Ex. 124”).

<sup>31/</sup> *Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 506 & n.22 (2002) (“*Verizon Communications*”) (noting that under TELRIC, “the marginal cost of a most-efficient element that an entrant alone has built and uses would not set a new pricing standard until it became available to competitors”).

assumption on the ground that, even if GR-303 unbundling capabilities are not currently available, the development of such capabilities may be “technically feasible,” *Order* ¶ 315, because the problems with such unbundling are “eminently solvable,” *id.* ¶ 319. But “*technical feasibility*” is not the relevant test: as the Commission found in its *Triennial Review Order*, any technology assumed for TELRIC purposes must be actually deployed and capable of performing the relevant function in at least *some* carrier’s network, and may not be technology that theoretically “may be available in the future.”<sup>32/</sup> Indeed, the *Order* recognizes elsewhere that TELRIC disallows “overly optimistic assumption[s] about the capabilities of currently available technolog[ies].” *Order* ¶ 569. Its failure to comply with the “currently available” limitation here is reversible error. *See* 47 C.F.R. § 1.115(b)(2)(i).

The *Order* also points to two pieces of evidence to support its 100% IDLC-GR-303 assumption, but neither shows that IDLC-GR-303 is currently available. First, it relies on a few isolated quotes in the non-cost arbitration record that it contends demonstrate that IDLC-GR-303 standalone loop unbundling is possible. *See Order* ¶ 315 nn.817-18 (citing Non-Cost Testimony at 276-78, 292-93 (John White)). But those quotes do not support the *Order*’s conclusion. The cited testimony explains that where a loop is served by IDLC, and there is *no* UDLIC or copper available, Verizon VA could install an entirely new *unintegrated* DLC system, including a new central office terminal, to provision a loop to the relevant customer. This would involve “unintegrat[ing]” all of the customers served by the DLC system — a process that would require the “conver[sion]” of the “whole” central office terminal to “universal” from scratch. Non-Cost

---

<sup>32/</sup> Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket Nos. 01-338, 96-98, 98-147, FCC 03-36, ¶ 670 n.2020 (rel. Aug. 21, 2003) (“*Triennial Review Order*”).

Tr. at 276-77 (White). This testimony thus actually illustrates that an IDLC-fed loop could *not* be unbundled. Indeed, the *Non-Cost Order* seems to recognize this, noting that unbundling a loop served by IDLC would require movement to a copper or UDLC facility.<sup>33/</sup>

The *Order* similarly misinterprets non-cost testimony with respect to whether the transfer of a loop from IDLC “to a UDLC loop” could be achieved “automatically.” *Order* ¶ 315.

Whether or not such a migration could occur automatically is irrelevant: rather, the fact that such a migration is necessary at all demonstrates that IDLC cannot be used to unbundle standalone loops.

The *Order* next points to the fact that Verizon’s network in the former-GTE region uses IDLC-GR-303. *Id.* ¶ 317. But this fact has no relevance to the question whether IDLC can be used to provision standalone unbundled loops to CLECs: no party denies the *existence* of IDLC-GR-303 or suggests it is not deployed anywhere. The point is, however, that existing GR-303 technology does not have the necessary capabilities to unbundle standalone loops.

Finally, the *Order*’s 100% IDLC assumption also makes no sense because it ignores record evidence that UDLC is required to serve *non-switched* services.<sup>34/</sup> IDLC cannot be used for such services because such lines are by definition integrated into the switch. *See* Verizon

---

<sup>33/</sup> Memorandum Opinion and Order, *Petition of WorldCom, Inc. et al, Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration*, 17 FCC Rcd 27039, 27274 ¶ 478 (2002) (“*Non-Cost Order*”).

<sup>34/</sup> The evidence showed that approximately ten percent of the network consists of non-switched services. *See* Tr. at 4160 (Gansert); VZ-VA Ex. 107 at 97-98. While the Bureau suggested that once it excluded DS3s and DS1s from Verizon VA’s calculations, lines requiring UDLC “would constitute only a fraction of” Verizon VA’s proposed 10% figure, *Order* ¶ 318, the only record evidence on this point contradicts that conclusion: As Verizon VA witness Joseph Gansert testified at the hearings, Verizon VA’s 10% estimate specifically accounted only for *narrowband* services and therefore did not include DS1s and DS3s. Tr. at 4160.

Virginia Inc. Recurring Cost Panel Direct Testimony at 97-98 ("VZ-VA Ex. 107"). *No party* challenged this. Since TELRIC requires the assumption of "a local network that could provide all the services [the] current network provides," *Triennial Review Order* ¶ 669, the *Order's* adoption of 100% IDLC is untenable for this reason as well.<sup>35/</sup>

The Commission instead should adopt Verizon VA's proposed mix of 57.6% IDLC ports and 42.4% analog ports. VZ-VA Ex. 107 at 97. This forward-looking assumption was based on Verizon VA's experience regarding the mix that it has used in recent DLC deployments, *id.*, and far exceeds anything that will occur in Verizon VA's real overall network. Indeed, only 23% of Verizon VA's access lines use IDLC technology. VZ-VA Ex. 124 at 15; *see also id.* (expecting that in three years the network will consist of 26% IDLC). The Commission should also find that no GR-303 should be assumed for the forward-looking network. As Verizon VA has explained, there are *no* GR-303 interfaces deployed in Verizon VA's network today, and Verizon VA has no plans to deploy them in the future.<sup>36/</sup> At the very least, the Commission should adopt the assumption in Verizon VA's studies that 10% of all loops (and therefore switch ports) will be served using GR-303 IDLC technology since that assumes far more such technology than is likely to ever exist in Verizon VA's network.

---

<sup>35/</sup> The *Order* defends its decision to omit all UDLC by insisting that planning guidelines in Verizon's former-GTE territory show that "UDLC systems are no longer necessary to provide non-switched special services." *Order* ¶ 317. But the 2000 former-GTE document to which the *Order* refers does not even discuss the provision of non-switched services. Further, it specifically refers to the use of the *UDLC* interface on Litespan 2000 DLC systems even where IDLC is deployed. WorldCom, Inc. Ex. 120 at 6 (Litespan-2000 Application Guidelines); *see also* VZ-VA Ex. 122 at 83.

<sup>36/</sup> VZ-VA Ex. 107 at 91; Tr. at 4087, 4154, 4156-57 (Gansert) (noting that there is "no rational reason for [Verizon VA to] deploy a significant amount of GR303 in the future"); VZ-VA Proffer, Gansert Supplemental Testimony at 9-10.

**4. The Order Fails to Consider the Implications of Its Flat-rate Structure for Reciprocal Compensation.**

The *Order* concludes that carriers “that pay a flat, per line port price for unbundled end-office switching should not . . . pay the incumbent LEC any additional amount for use of end-office switching to terminate reciprocal compensation traffic.” *Order* ¶ 488. In other words, CLECs who purchase UNE-P do not have to pay Verizon VA for terminating reciprocal compensation traffic to the CLEC customer served by that UNE-P line, supposedly because Verizon VA receives a flat charge for use of its unbundled switch. As discussed above, however, because the costs of end office switching are usage sensitive, this itself is incorrect.

But even apart from that error, the *Order*’s own logic does not apply in the converse situation: Where a CLEC hands off traffic to Verizon VA at an end office to terminate to Verizon VA’s customer, that CLEC is required to pay reciprocal compensation to Verizon VA for its own use of the switch to terminate that call. And, of course, even the *Order* by its terms clearly does not apply when the CLEC does not purchase UNE-P at all but instead serves the originating customer with its own switch and then hands off the traffic to Verizon VA. The *Order*, however, does not establish *any* reciprocal compensation rate for traffic handed off for termination at a Verizon VA end office under these circumstances. While Verizon VA will file an appropriate rate in its compliance filing, the Commission should make clear that, to the extent CLECs attempt to interpret the *Order* as entitling them to terminate calls to Verizon VA customers without payment, that interpretation is incorrect.

Any other rule would be unlawful. The Act clearly requires CLECs to pay Verizon VA for the cost it incurs in terminating their traffic. *See* 47 U.S.C. § 251(b)(5). And Verizon VA clearly incurs such costs. As the Commission concluded in the *Local Competition Order*, “carriers incur costs in terminating traffic that are not *de minimis*,” and “the ‘additional cost’ to

the LEC of terminating a call that originates on a competing carrier's network primarily consists of the traffic-sensitive component of local switching." *Local Competition Order* at 16024-25 ¶ 1057, 16055 ¶ 1112. The Commission has consistently recognized that such traffic sensitive costs of the switch are "additional cost[s] to be recovered through termination charges."<sup>37/</sup> And, as even the *Order* recognizes, some portion of end office switching is traffic sensitive.<sup>38/</sup> *Order* ¶ 473. Accordingly, Verizon VA incurs costs for terminating calls that it is entitled to recover under existing rules.

The *Order* could not lawfully require Verizon VA to stop charging reciprocal compensation to carriers who terminate traffic to Verizon's end offices because such a rule would create entirely new policy in an area that the Commission currently has under review. The Commission is in the midst of evaluating whether and when it makes sense to replace existing reciprocal compensation rules with bill and keep. See Notice of Proposed Rulemaking, *Developing a Unified Inter-carrier Compensation Regime*, 16 FCC Rcd 9610, 9624-37 ¶¶ 37-76 (2001). But as the Commission has recognized, "shifting to a new paradigm for inter-carrier compensation . . . may create new and unexpected problems." *Id.* 9630 ¶ 58. Indeed, the Commission has specifically noted that moving to a bill-and-keep regime would involve "various

---

<sup>37/</sup> *Order, Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, FCC Docket No. 95-185, 2003 WL 22047787, ¶ 6 (Sept. 3, 2003) (quotations omitted).

<sup>38/</sup> Such termination costs would not be recovered through the flat rate paid by the carrier who purchases UNE-P or by Verizon VA's retail customers. The CLEC whose UNE-P customer originates the call pays for the switch functionality at the *originating* end of the call through the flat-rated charge for end office switching, but that charge clearly does not cover the costs for the switch functionality at the terminating end of that call. And the retail rate for the Verizon VA customer receiving the call is not intended to recover the costs of terminating calls to that customer. The Commission made clear that terminating calls from another carrier imposes *additional* costs that clearly were not built into the retail customer's rates — a customer does not, for example, typically get charged a minute-of-use rate for calls he or she receives.

implementation issues or problems.” *Id.* Those are precisely the complex issues the Commission is currently considering in its industry-wide rulemaking. It would be entirely inappropriate to simply adopt this new rule, *without* the benefit of industry participation, in this proceeding.<sup>39/</sup> Further, such a proposal was never even made on the record in this case, and thus even the parties to *this* proceeding were denied an opportunity to comment on it.

The Commission should, as noted above, reverse the *Order*’s adoption of a flat-rate structure altogether. This would ensure that all CLECs pay minute-of-use charges for whatever use they make of Verizon VA’s end office switches. But in any event, Verizon VA clearly has a legal right under the Act to recover a reciprocal compensation termination charge from CLECs when Verizon VA terminates calls originating from the CLECs’ customers. Because the *Order* fails to establish the applicable charge, the Commission should approve the charge Verizon VA includes in its compliance filing and make clear that any interpretation of the *Order* that denies Verizon VA the right to impose such charges on carriers when they terminate traffic at Verizon VA’s end offices would be unlawful.

**5. The *Order*’s Adjustment to Verizon VA’s Computation of Total Annual Minutes Should Be Reversed.**

The *Order* significantly inflates the total number of annual minutes over which switching investment is spread and therefore reduces tandem switching rates.<sup>40/</sup> It does so by increasing

---

<sup>39/</sup> See, e.g., *Air Transport Ass’n of Am., Inc. v. FAA*, 291 F.3d 49, 56 (D.C. Cir. 2002) (“As the United States Supreme Court has noted, APA rulemaking is required if an interpretation ‘adopt[s] a new position inconsistent with . . . existing regulations.’”) (quoting *Shalala v. Guernsey Mem’l Hosp.*, 514 U.S. 87, 100 (1995)); *Paralyzed Veterans of Am. v. D.C. Arena L.P.*, 117 F.3d 579, 586 (D.C. Cir. 1997) (“To allow an agency to make a fundamental change in its interpretation of a substantive regulation without notice and comment obviously would undermine th[e] APA[’s] requirements.”).

<sup>40/</sup> Although this error does not currently affect the calculation of end office switching rates given the *Order*’s use of a flat rate, if the *Order*’s decision to adopt such a flat rate is reversed —

the number of days used in Verizon VA's calculation of total annual minutes of use. In particular, because switches must be designed to handle peak traffic levels, in order to determine the annual minutes of use, Verizon VA must determine the effective number of days that experience usage levels equivalent to the average daily load during the busy season.

The *Order's* decision to increase the number of days used in Verizon VA's calculations should be reversed for two reasons. First, *no* party contested Verizon VA's figure for the number of days, and no alternative was proposed on the record. The "baseball arbitration" rules used in this proceeding thus required adoption of Verizon VA's proposal and did not permit the Bureau to reach out and devise its own substitute input. Second, the assumption the *Order* adopts is simply based on a flawed methodology.

In order to calculate the total number of annual minutes over which to spread the investment that Verizon's cost models produce, Verizon VA first identified demand during the busy hour in the busy season. The busy hour is defined as the hour during the business week in which the switch experiences the highest demand; the busy season is defined as the three months of the year that experience the highest demand. To spread the cost per busy hour minute-of-use across all minutes, Verizon applied two factors. In the course of these calculations, Verizon VA used an input representing the number of effective calendar days that experience a busy hour. Many days, such as weekends and holidays, as well as business days outside of the busy season, experience much lower total day usage than during that peak busy season. Verizon VA's switching studies assumed that the average daily load in the busy season was experienced for 251 effective calendar days. *See generally* VZ-VA Ex. 107 at 200-01.

---

as it must be — then the *Order's* erroneous method of determining total minutes of annual use also would improperly reduce end office switching rates.

No party even attempted to demonstrate that Verizon VA's proposed input was wrong. Neither AT&T nor WorldCom proposed an alternative to the 251 day assumption. Indeed, in rerunning Verizon VA's studies, the CLECs relied on Verizon's total minutes of use calculations, which reflect this assumption. See AT&T/WorldCom Ex. 12 (Restated Workpapers). Thus, Verizon VA's proposal was the *only* one on the record. The *Order* nonetheless adopts an input of 339 effective days. See *Order* ¶ 457. This figure is adopted with no warning and little discussion. The analysis and justification are limited to the Bureau's independent and incorrect calculations. The parties never had an opportunity to comment on the Bureau's approach, because it was never even proposed or discussed during the case. The *Order* accordingly violates the "baseball arbitration" rules under which the Bureau was required to choose one of the party's proposals, particularly here, where no one even challenged Verizon VA's proposal.

A 339-effective-calendar-day assumption also makes little sense. This would mean that only 26 days of the year do not experience the average busy season busy day load, and that almost 75% of the weekend days in a year experienced the busy day peak traffic that characterizes the busiest time of the year.<sup>41/</sup> That is absurd on its face, and the *Order* has no reasoned basis for finding otherwise. Given that Verizon VA's calendar day figure was the only

---

<sup>41/</sup> Moreover, the *Order*'s methodology has two obvious significant flaws. First, it used the wrong version of Verizon VA's switching studies to determine the number of tandem trunks in Verizon VA's network. Although the *Order* recognizes that Verizon VA filed a revised switching study "correct[ing] errors in the tandem switching part of its study," *Order* ¶ 8, the *Order* erroneously used the understated number of tandem trunks from Verizon VA's initial study. Second, the 2001 ARMIS DEMs data on which the *Order* relies include minutes that are unrelated to billable switched minutes (e.g., minutes relating to operator service calls), and which should have been excluded from the Bureau's calculation. If these two adjustments alone were made to the *Order*'s calculation, the total minutes per trunk generated by that calculation would have been far lower, which would have increased the minute-of-use charge.

proposal on the record and that no party challenged it during the proceeding, the Commission should adopt Verizon VA's proposal.

**6. The *Order* Should Have Made EF&I and RTU Adjustments as a Result of the Substantial Reductions to Switching Investment.**

**a. EF&I Factor.** After substantially reducing Verizon VA's switching investment, the *Order* should have increased Verizon VA's switching EF&I (engineering, installation and furnishing) factor to ensure that Verizon VA recovered the proper amount of EF&I costs. As the *Order* recognizes, "as material costs decline, the EF&I factor should increase." *Order* ¶ 525. But the *Order* makes no such adjustment.

The EF&I factor is a ratio that compares the total cost of installed investment (investment plus EF&I costs) of digital switching equipment to the materials only investment for the same equipment. VZ-VA Ex. 122 at 201. The *Order* adopted Verizon VA's EF&I factor, finding it preferable to and more reliable than AT&T/WorldCom's proposal. *Order* ¶ 444. But by applying that factor without adjustment to a reduced investment amount, rates based on the *Order* will understate EF&I costs.

Even the *Order* admits that the reductions to switching investment render Verizon VA's initially proposed EF&I factor "conservative." *Id.* This is because, as the *Order* notes, the "Material Only" component of Verizon's EF&I factor is based on Verizon's 1998 switching material costs and "reflects a relatively large percent[age] of growth and upgrade jobs for which Verizon receives a relatively small discount." *Id.* ¶ 444. However, the EF&I factor "will be applied in the cost study to investments that reflect mostly the relatively large discount Verizon receives for new switches . . . ." *Id.*

Applying an EF&I factor calculated based on one investment base to a different (and lower) investment base produces skewed results. For example, if the cost to engineer a switch is

\$100, and the switch costs \$400, the EF&I factor would be 1.25 (500/400). If a new discount were applied to the switch price, so that the cost was assumed to drop to \$200, applying the 1.25 EF&I factor would yield \$250, only \$50 of which would account for engineering costs. But the time and cost involved in engineering the switch will not have changed simply because the switch price was arbitrarily reduced to a lower level than Verizon VA actually will pay going forward. VZ-VA Ex. 107 at 42. Thus, as Verizon VA explained, “an adjustment [is] necessary to ensure that the original factor, when applied to [reduced] material-only investments, will still yield the correct ratio of engineering and installation costs.” *Id.* at 42–43. Indeed, as noted above, the *Order* itself agrees that, “as material costs decline, the EF&I factor should increase.” *Order* ¶ 525. The Commission accordingly should increase Verizon VA’s EF&I factor in proportion to the final reduction in switching investment costs so that it yields the proper level of engineering and installation costs.

b. **RTU Fees.** Having determined that 90% of Verizon VA’s switching investment should be assumed to be purchased at the “new” switch discount level, the *Order* should have modified the level of right to use (“RTU”) fees in the study to reflect the greater RTU costs that would be incurred as a result. Verizon VA’s proposed RTU factor, and the one ultimately adopted by the *Order*, is based primarily on ongoing expenditures for RTU fees. It does not account for the expensive initial software load that is required in connection with a new switch. Verizon VA provided evidence that the up-front payment for new switch RTU fees is approximately \$2 million per switch; the record showed that AT&T’s agreement with Lucent supported that assessment.<sup>42/</sup> While the *Order* “decline[d] to rely on this contract,” *Order* ¶ 450,

---

<sup>42/</sup> VZ-VA Switching Br. at 23; VZ-VA Ex. 122 at 198–99; AT&T Response to VZ-VA 1–1 and attached Contract No. LLJ288D, Exhibit 1 — Attachment A, page 1, item 4.

that decision is insupportable. No party challenged this evidence or provided a different up-front RTU figure. Accordingly, if the Commission assumes a greater number of new switch purchases than in Verizon VA's studies (which, as discussed above, it should not), the Commission should correspondingly increase Verizon VA's RTU factor to account for the additional \$2 million in RTU fees Verizon VA will incur per switch.

**7. Verizon's Analog Line Port Utilization Factor Should Not Be Adopted for Digital Line Ports.**

The *Order* adopts Verizon VA's *analog* line port fill factor for both analog *and* digital line ports. This decision was in error because, as all parties agreed, digital line port utilization necessarily is much lower than analog line port utilization, and *all* parties accordingly proposed digital line port fill factors that are *lower* than the figure adopted in the *Order*.

Digital line ports differ from analog line ports in that analog line ports require capacity only on the switch, while digital line ports require capacity both on the switch and at the DLC remote terminal. As a result, the capacity of analog line ports can be more easily increased and utilization can be maintained at a higher level. VZ-VA Ex. 107 at 195. Even AT&T/WorldCom recognized this difference between analog and digital line port utilization and, in fact, AT&T/WorldCom recommended a digital line port fill factor *lower* than what the *Order* adopts.<sup>43/</sup> While the *Order* suggests that it was not convinced that *either* party's digital line port factor was correct, *Order* ¶ 434, the fact that *both* parties agreed that digital line port utilization is lower than analog line port utilization contradicts the *Order*'s adoption of the analog line port fill factor for both. That determination should be reversed, and the Commission should adopt Verizon VA's digital line port utilization factor.

---

<sup>43/</sup> See Direct Testimony of Joseph P. Riolo on Behalf of AT&T and WorldCom, Inc. at 37 (July 31, 2001) ("AT&T/WCom Ex. 6").

**8. The Growth Rates Adopted For Tandem Trunk Ports and Trunk Usage Should Be the Same.**

The *Order* recognizes that “[t]here is a need for consistency between . . . the number of line ports, trunk ports, and minutes of use over which to spread the investment. If there is an inconsistency, cost per unit may be overstated or understated.” *Order* ¶ 417. Nonetheless, the *Order* inexplicably adopts a growth rate of 3% for tandem trunk ports, *see id.* ¶ 412, while adopting a 5% growth rate for tandem trunk minutes of use. *See id.* ¶ 419. That decision is contrary to the *Order*’s general statement of principle and with its adoption of a consistent annual growth rate (of 2.5%) for both end office lines *and* per-line busy hour usage. *See id.* ¶¶ 404, 411.

The *Order*’s adoption of different growth rates for tandem trunk ports and tandem trunk usage also makes no sense. That determination means that Verizon VA’s tandem trunks would grow 17% over the 12-year life of a switch, while tandem trunk minutes of use would grow by 34%.<sup>44/</sup> It is implausible that Verizon VA’s tandem trunk facilities would be able to handle proportionately more and more traffic every year, while maintaining needed spare capacity. Moreover, if the *Order*’s disparate tandem trunk and usage growth rates are implemented, Verizon will recover a smaller amount of tandem trunk port investment each successive year relative to every minute of use. This will result in certain under-recovery of costs, and must be reversed. The Commission accordingly should adopt the same growth assumption for tandem trunks and tandem trunk minutes of use.

---

<sup>44/</sup> These overall growth rates are derived from the inputs contained in Appendices C and D of the *Order*, compounded over the 12-year life of the switch.